

The Farm BULK MILK HAULER

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The Farm BULK MILK HAULER

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CONTENTS

Requirements of Milk Haulers	4
Recommended Routine	5
Farm Bulk Milk Cooling Tanks	7
Cleaning and Sanitizing Tanks and Tankers	7
Cleaners	8
Washing a bulk tank	9
Sanitizing a bulk tank	9
Chemical sanitizers	9
Cleaning and sanitizing the tanker	12
Sediment Testing	13
Bacteria	14
Flavors and Odors in Milk	15
Sampling Suggestions	16
Test Examination Questions	18
How to Evaluate Your Job	20

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THE FARM BULK MILK HAULER'S JOB no longer requires great physical strength to pick up the nation's milk supply. The necessary stamina is needed, however, to keep the tanker moving to pick up the milk regardless of weather or other obstacles.

This job requires training, knowledge, and initiative.

The operator of a tank truck is at once a truck driver, a weigher and sampler, a milk quality judge, and the contact man for the company buying the milk. He must operate a valued piece of equipment and deal with the most valuable commodity a milk company has — its patrons.

The northeastern states have more than 20,000 bulk tanks in use on dairy farms. The average number of farms served by a farm bulk tank pick-up truck is 15, which means that there are about 1300 routes.

Some of these routes are covered each day, but the majority are serviced on an every-other-day schedule. Each day about 750 routes are followed and about 11,000 farms visited by the truck operators.

Often more than one driver is assigned to a truck in order to keep it going seven days a week. Thus there are more than 750 drivers making collection now, and with expected personnel changes and additions, there is a continuing problem in training present drivers to understand their duties and in preparing future drivers.

It is certain that the industry will use more bulk farm tanks in the future. The potential, projected to 1965, is over 60,000 tanks, requiring 4000 routes and over 2000 trained drivers.

Sixty thousand bulk tanks will cost most than \$100,000,000 and the tankers to serve them will have a value, when purchased, of \$25,000,000. This costly equipment requires intelligent management through proper training.

With the bulk tank system, milk is no longer purchased at the plant where suspected milk can be set aside until quality checks have been made, and where milk can be sent back unpurchased if it does not meet the standards of a well-trained deck tester. With the bulk system, the milk becomes the property of the plant when the truck's

pump is started. Moreover, the milk is in one large vessel without a chance for rejection of a single can or cans which are judged unfit. All or none must be accepted and the driver, without training, won't know whether or not to reject or receive the milk. To further complicate things, the milk of one farmer is mixed with that of others, so that a little poor milk may contaminate a large delivery of what was excellent milk, perhaps far better in quality than the average of milk sold in cans.

Requirements of Milk Haulers

Operators of farm bulk milk tankers must be trained. This statement applies to women as well as to men. There are women who are already on this kind of a job.

It is most important that they be alert and willing to take the responsibility for the day-to-day relationships with farmers which are necessary to the smooth operation of a bulk route.

In most states the truck operators must hold chauffeurs' or truck drivers' licenses in order to operate the trucks. This means that they must have good coordination, an understanding of the rules of the road and be old enough to qualify for the licenses. If they can pass the driver's test, they must have good eyesight, not only for driving but to be able to read the charts and the measuring devices. The drivers must have good health in order to perform their services on each scheduled working day with few interruptions from illness. The haulers must have, or be trained to have, an understanding of cleanliness and sanitation. It is their job to be fussy about the quality of milk they receive and of the equipment in which it is handled.

Haulers must have integrity. Whether they are driving their own truck or a truck owned by the company, they are still the company agents in dealing with farmers. They must be fair to the farmer in regard to measurement and sampling and they must be fair to their milk company in seeing that there are no inequities in their dealings.

In most states haulers must be licensed to measure and sample the milk and it will often be their responsibility to take quality samples which are used as a basis for paying the farmer. They must have a knowledge of the dairy field. They must understand the process of milk production and know something of the chemical and physical characteristics of milk. It is desirable that they have some experience in a dairy field before they attempt to operate a route. They must have a keen sense of smell and certain of the attributes of a detective in determining when they should receive milk and what may or may not have been done with or to the product.

It is most important that they do not have set ideas about their job. They must be willing to learn, to give new ideas and new procedures a chance to work and to understand their company's public relations program, which is so important a part of this work. Above all, they must appreciate and support the policies of the company they represent, for without their cooperation no milk company can long stay in business.

The haulers must have some knowledge of the federal, state, and municipal regulations and the market requirements of the market where they pick up milk.

One of the haulers' greatest responsibilities will be to receive or reject milk. The decisions that are made will govern the type of milk the plant can offer its consumers.

Sound like a difficult job? It is, and it demands an understanding and a training which were not necessarily required in the job of handling milk in cans. The proper performance of this job will reduce the amount of work which must be done by the farmer, hauler, and fieldmen. It is an important job — one which has dignity and responsibility.

Recommended Routine

The bulk milk tank hauler's routine is as follows:

Obtains truck

- Checks gas, oil, and water supplies. Checks tires and motor.
- Washes hands.
- Sanitizes truck and hose compartment equipment.

Checks on equipment

- Sample bottles
- Dipper or collection tubes
- Hose
- Pump
- Electrical appliances
- Record data
- Receipt books
- Pencils and pens
- Cleaning tissue
- Sanitizing materials and facilities
- Refrigeration for samples

Drives to farm

- Parks alongside milk house.
- Enters milk house.
- Checks leveling devices on tank.

Washes hands.

Checks odor, temperature, and appearance of milk in milk tank.

Milk should be below 40°F for pick up.

Makes sure milk is not moving.

(Turns off control switches)

Pulls measuring stick out and wipes it off with cleaning tissue.

Returns stick to proper position in tank.

Takes stick out and reads it.

If stick is not retained in tank it is sanitized, put in proper position, pulled out, and properly read.

Follow proper directions in using other milk measurement devices if used.

Records reading.

Starts agitator and notes time. Agitator must run at least for four minutes.

Changes inches of milk to gallons or pounds and records data.

Completes records, makes out receipt for farmer and leaves it in the appointed place.

Receipt should have on it inches, pounds, odor, and temperature of milk, plus the date and time of pick up.

Sanitizes end of hose and tank valve.

Makes the hose connection between farm tank and tanker.

Checks agitation time.

Agitator must run for at least four minutes prior to sample collection.

Collects samples of fat, sediment, and bacteria.

Puts samples in refrigerated or storage compartment.

Checks valve entrance to tanker.

Opens valve on farm tank.

Starts pump on tanker.

Shuts off switches on farm tank.

When farm tank is empty, shuts off pump.

Disconnects, and returns the hose to compartment on tanker.

Puts rest of equipment away.

Closes truck storage compartment.

Returns to milk house.

Rinses tank and floors thoroughly.

Leaves for next farm where routine proceeds all over again.

It would be desirable for a prospective milk hauler to ride a bulk tank pickup route with an experienced man to see how easily this job is accomplished by the above routine.

Farm Bulk Milk Cooling Tanks

I. Tanks

1. Two types of tanks
 - a. Vacuum
 - b. Atmospheric (open type)
2. Two methods of refrigeration
 - a. Direct expansion
 - b. Sweet water or ice bank
3. 25 to 30 manufacturers of tanks
4. Select tank on these bases
 - a. Service
 - b. Cost
 - c. Type you like
 - d. One with 3-A label
 - e. Approved list

II. Operation of Farm Tank

1. Check proper installation, level, calibration, and cleaning of tank before use.
2. Don't run compressors on direct expansion units or agitators on any unit until the milk supply put in the tank can be moved by the agitator without too much beating. Churning or freezing of the milk also might occur.
3. With one or more milkings in the tank, start compressors that need starting and all agitators immediately before pouring in the next volume of milk.
4. Check occasionally the controls, temperature of milk, and the general operation to see if tank is performing its function.
5. Check any abnormality, such as freezing or churning, and remedy cause.

The physical equilibrium of milk is readily and easily disturbed. Any mismanagement of milk through agitation, churning, freezing, and thawing will create a breakdown of the structure of milk which makes the milk abnormal, therefore undesirable for market. Both farmer and hauler should always be alert to matters concerning compressor, power, and controls of farm bulk milk tankers.

Cleaning and Sanitizing Tanks and Tankers

Surfaces must be clean. Milk contact surfaces become soiled with milk and its residues, water and its residues, cleaner residues, and extraneous matter which may contact the surface.



Thorough cleaning of the tank is a necessity.

One of many in-place cleaning sprayers.

Cleaning is a 4-step operation:

1. The most important step is rinsing. All surfaces must be completely rinsed with a high-velocity stream of water. With bulk tanks, this rinsing is the responsibility of the trucker.
2. Surfaces must be washed here by high-velocity recirculated cleaner solutions or by scrubbing of surfaces with a properly designed brush using an appropriate detergent.
3. All of the detergent solutions must be rinsed from surfaces with copious amounts of clear water.
4. Before the equipment is used, all surfaces must be treated with a sanitizing solution. It is undesirable for this solution to remain in contact with stainless steel parts for long periods because it is likely to cause corrosion.

Cleaners

It is essential to have soft water in order to do a proper cleaning job. This water can be naturally soft, it can be softened by means of chemical softening equipment, or it can be softened by the chemical ingredients in the detergent used. In general, if water is hard, it will pay to install a water softener. In the cleaning process, water functions as a carrier for the cleaning and sanitizing agents and as a carrier for the soil removed.

Alkaline detergents are the usual cleaner. These detergents make the fat more soluble; they dissolve carbohydrates and proteins and loosen other soils. They will not remove accumulated films of milkstone.

To remove milkstone films and to prevent formation of visible films, it is advisable to use acid cleaners periodically. Acid cleaners are not so effective in removing other soils. Use any cleaner according to the recommendations of its manufacturer and choose a cleaner with reference to your particular water supply and the job to be done.

Washing a Bulk Tank

Rinse immediately with lukewarm water (100-115°F). It is much more effective to rinse with a solid stream of water under pressure rather than a diffused spray. Scrub all surfaces with a good dairy cleaner and appropriate brush. Preferably mix the solution in a properly stored, clean rubber pail. Don't place this pail on the floor. Small parts must be disassembled and scrubbed separately. Temperatures of detergent solution need not be especially high — 100 to 115°F water is adequate with most cleaners. Rinse to remove all of the detergent; water at 100 to 115°F is recommended. Allow equipment to drain completely and, if possible, to dry. If milkstone accumulates, substitute an acid cleaner. Try to anticipate stone formation and use acid on a regular schedule before stone becomes visible. Choose a compound compatible to water used. In almost every situation the choice of a proper alkaline cleaner will prevent stone formation. The use of a good chamois will free the external surfaces of water to prevent water spotting.

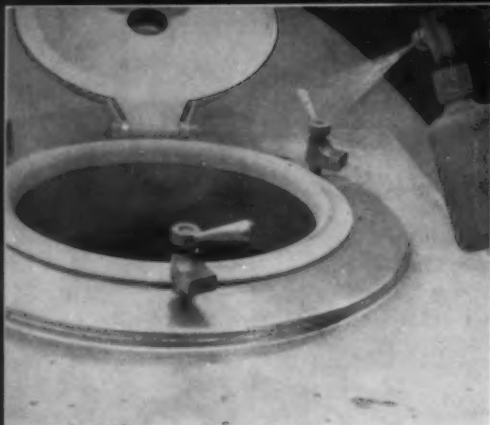
Sanitizing a Bulk Tank

Sanitize just before putting the first milk into the tank. Use a good sanitizer according to manufacturer's directions. A fogging device is recommended.

Chemical Sanitizers

Since it is not feasible to sanitize bulk tanks with heat, chemicals must be used. While heat is the best sanitizing method, enough hot water or steam must be used to raise the surface temperature above 180°F. This would ruin most bulk tanks because of its effect upon the refrigeration equipment.

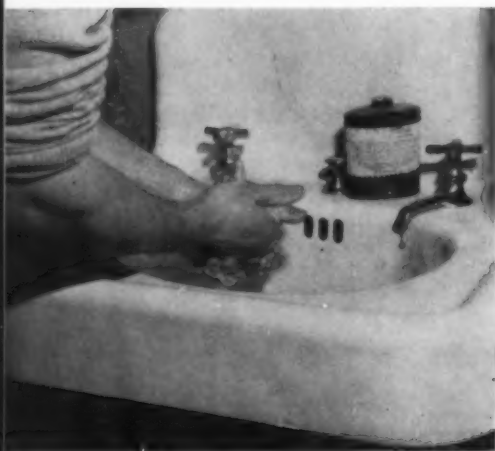
The cheapest and one of the most effective sanitizing agents is chlorine. It has the advantage of working conveniently at wide temperature ranges and it is more effective than most other agents in cold water. Since many bulk tank surfaces are always refrigerated, the actual temperature of sanitizing on the surface of the tank is essen-



1. Sanitizing the tanker by fogging.



2. Truck properly checked and ready to roll.



5. Washing before touching equipment.

A Typical Trip BUI

THE HAULER follows a to the end of his run. equipment are checked and product, he is personally cleanses and records data exact are shown in these pictures.

7. Measuring milk.



8. Agitating milk prior to sampling. Recording data.





3. Business end of tanker open for checking equipment.



4. Connecting electric and milk lines.

or a

MILK HAULER

careful routine from the start is sure that tanker and all is ready. Working with a quality product. He observes all time schedule. The highlights of his trip



6. Detecting odor of milk.

9. Collecting sample.

10. Using hose to rinse tank with water at 110°F.



tially that of ice water. No chemical sanitizer is very effective at this low temperature. Chlorine is more effective than most others.

Chlorine kills most types of bacteria if used for the right length of time at the proper temperature. It is used up by milk and other soils if they come in contact with the solution; only clean surfaces can be sanitized. Chlorine solution should not remain in contact with metal for long periods. In time, chlorine solutions will attack stainless steel, producing pits and rust spots. The effectiveness of chlorine and other sanitizers depends upon a time-and-temperature relationship. The longer the time, the weaker the solution may be. The health departments require that chlorine solutions be 100 p.p.m. where surfaces are flushed, sprayed, or dipped and 200 p.p.m. if surfaces are fogged. If the time is more than 15 seconds, these concentrations are at least twice as strong as necessary to sanitize relatively clean surfaces. The use of excessively strong chlorine solutions invites corrosion problems.

Quarternary ammonium compounds are generally more expensive than chlorine. They are usually not so effective in cold water or in hard water. They are not equally effective on all types of organisms, but they do an especially good job on those organisms known as thermotolerants. The quaternary ammonium compounds are usually less corrosive than chlorine.

Iodine compounds are becoming more popular, although they also are more expensive than chlorine. Weaker concentrations of iodine are used in comparison with chlorine. Iodine solutions are colored by the iodine and if the solution is used up by an excess of organic matter the color disappears, thus providing a built-in strength indicator. Iodine compounds are not recommended at temperatures above 140°F, because they tend to break down. They are also not recommended for use on plastics because of the marked discoloration which occurs. The amount of quaternary ammonium and iodine compounds to use will depend upon the particular formulation; follow the manufacturer's recommendations.

Cleaning and Sanitizing the Tanker

Cleaning the tank may be the hauler's responsibility or it may be the company's responsibility. In any matter, the responsibility must be firmly fixed so that the tank is sanitary at the time it reaches the first farm. If the tanker is to be handwashed, first rinse it with 100 to 115°F water. Prepare a washing solution in a plastic or rubber pail. Equipped with proper brushes and special rubbers on boots, enter the tank by using a special ladder and scrub all surfaces. Dismantle, when necessary, such parts as outlet valves, manhole parts, gaskets; scrub thoroughly. Rinse all surfaces until free of washing solution; allow the tank to drain and, if possible, to dry. The exterior

of the tank should be rinsed every time the tank is washed and thoroughly washed whenever it becomes dirty. Store the truck in a protected place. Sanitize just before use. Scrubbing the interior of the assembled tank is the most convenient way to sanitize. If it is not possible to sanitize the tank just before use because it is no longer at the plant, sanitize the tanker at the completion of the washing cycle and after a few minutes rinse the tank down with clear water, being careful not to contaminate milk contact surfaces with hands or hose. This will remove the chlorine which might otherwise contribute to corrosion. If the tank is to be washed mechanically, special techniques will be outlined by the equipment company or the detergent supplier to fit the conditions and water supply.

Sediment Testing

There are available several devices and methods for determining sediment in bulk tank milk. A relatively large sample may be taken from the stirred milk for testing in conventional equipment at the laboratory. The usefulness of this test is severely limited because the milk must be accepted before the test is made.

The tests which a driver may perform in the milk house all require that the milk be warmed because cold milk fat will not pass through the filter pad.

It is difficult to sample bulk tanks by the off-the-bottom method. It is generally conceded that one gallon of stirred milk gives about the same amount of sediment as a pint of milk taken off the bottom and, therefore, it is becoming common practice to use a 1-pint sample forced through a filter of one-eighth the area of the standard disc. The milk sample may be warmed by mixing it with clean warm water, by immersing the filled sediment chamber in a container of hot water, or by special instantaneous heating devices.

The sediment standards used must comply with the requirements of the particular market.

The control of sediment in milk is simple: keep dirt out of milk.

Remember before milking:

DON'T

1. Sweep barn
2. Groom cows
3. Handle feed
4. Prepare cow bed
5. Lime walks
6. Superphosphate walks
7. Stir up dust
8. Pour milk in barn except in conveyor systems

DO

1. Wash hands
2. Sanitize equipment
3. Practice managed milking
4. Wash udders clean
5. Keep milk covered
6. Pave dusty barn yards
7. Pick up milk in a clean manner.
8. Feed and complete chores after milking

Bacteria

Bacteria are small microscopic one-celled plants or animals that both aid and destroy mankind.

They destroy organic waste, fix nitrogen, ferment foods, produce gas, produce penicillin, and, fortunately, only a few cause disease.

These microorganisms are small, varied in shape, have a variety of structures, and grow rapidly in given temperature and environments.

Bacteria are present practically everywhere, even in milk aseptically drawn from a cow.

Cleanliness is essential in preventing bacterial contamination of milk.

Environments must be kept immaculate.

Perhaps the two terms that haulers will hear in relation to bacteria are thermophiles and thermodurics.

Thermophiles are organisms that grow and thrive in heat. They will survive, as do thermodurics, normal pasteurization temperatures.

Thermodurics are the type of organisms that concern milk producers most. These organisms are ever present in dirt, filth, manure, bedding, feed, and hair.

Thermodurics survive pasteurization. They are used as a guide to clean milk production, because it is generally conceded that they get into a milk supply by external contamination. Hence, their control comes from producing milk in an environment free from contaminants.

Under normal milking conditions bacterial contamination occurs. The job of the milk producer is to protect milk from all the sources of contamination that he possibly can. Keeping milk clean, cold, and covered are requirements for producing a high-quality milk.

Bacteria counts are commonly made by one of two methods:

1. *The direct microscopic plate count*
2. *The standard plate test*

As these are highly technical laboratory procedures they need not be discussed here.

As far as the milk hauler is concerned his knowledge should be such that prevention of bacterial contamination is his goal. Careful refrigeration is necessary to maintain at status quo those organisms that inadvertently get into the milk supply.

Flavors and Odors in Milk

As the hauler must judge the flavor and odor of milk the table below will be helpful.

Remember that odors and flavors of milk are more readily detected in warm milk.

Unless the milk house is properly ventilated and free from strong odors, it is impossible to judge the odor of the milk in the bulk milk tank.

FLAVOR	CAUSE	CONTROL
<i>Feed, weed, garlic, unclean, barny, cowy, silage, physiological</i>	Exposure of animals to strong odors of feed, silage, manure, etc. Due largely to lack of proper ventilation. Due to material eaten or to illness of animals.	Feed strong smelling feeds only after milking. Ventilate barn. Clean barn. Wash udder. Take cows from pasture 3 to 4 hours before each milking. Do not ship milk from sick cow.
<i>Rancid</i>	Violent agitation of warm milk in presence of air. Cows in late lactation. Warming cooled milk to about 85°F and recooling.	Avoid agitating warm milk. Tighten joints of pipelines. Avoid risers. Do not allow cooled milk to warm above 70°F when raw.
<i>Oxidized, tallowy, cappy, metallic</i>	Traces of copper or other metals dissolved in milk. Oxygen, light, or chlorine may increase trouble. Some feeds may protect against oxidized flavor and trouble may be more prevalent as fewer protective feeds are fed.	Handle milk only in stainless steel or glass. Protect from chlorine and light. Feed as much fresh, green feed as possible. Eliminate the milk of individual cows when necessary.
<i>Sour</i>	Bacterial growth produces acids when milk is handled carelessly.	Draw milk from clean cows into clean utensils, using clean methods. Cool promptly to below 50°F.
<i>Chemicals Insecticides Pesticides Disinfectants Paints</i>	Absorbed through respiratory system of cow, or may enter milk as contaminant from utensils or by addition.	Use only clean utensils and clean methods. Keep surroundings free of strong odors. Store only necessary materials in milk house.
<i>Salty</i>	Late lactation milk, possibly mastitis.	Don't milk stripper cows or send in mastitis milk.
<i>Flat</i>	Poor nutrition and feed. Low fat and low solids in milk.	Better nutrition. Eliminate low testing producers.

Normal milk is virtually without odor at receiving temperatures; its taste is bland, very slightly sweet, pleasant to most people. It is reasonable to assume that the hauler will occasionally be called upon to pass on milk which does not meet these ideal specifications or the standards of the market in which he works. A firm impression of what constitutes normal flavor and odor will enable the hauler to pass sound judgment on such offerings. To this end, these observations may be of help:

1. If the hauler is properly acquainted with his farms he will quickly note any changes in quality. Any change — no matter how small — must be brought to the attention of the patron. The hauler's warning is the patron's earliest indication of impending trouble.
2. Changes in physical appearance — severe icing, presence of quantities of churned product on the surface of the milk, presence of flakes of milk solids, evidence of souring — almost invariably mean that the milk is damaged beyond acceptability. Odors which are grossly abnormal likewise call for rejection.
3. Slight odors often disappear upon agitation. Their effect upon the quality of the product can be determined by warming under the hot water tap a small quantity of milk in a composite sample bottle or other closed container. Retained odors will be released readily as the temperature rises.
4. Any milk which calls attention to itself because of an unusual characteristic is not normal milk. The hauler will do well to determine the nature and extent of the abnormality before accepting the product. A flavor control sample for laboratory checking is desirable to confirm his findings.
5. Because the rejection of milk imposes serious losses on the farmer, the hauler, and the buyer, it is important that the hauler report to the plant manager or field man any situation which threatens his confidence in the production of any farm on his route.

Sampling Suggestions

I. Recommended Procedure for Haulers' Care of Composite Fat Sample Bottles

1. Containers should be properly labeled with producer identification at all times.
2. Start with clean dry containers containing the approved preservation tablets if composite samples are to be carried.

3. All samples must be maintained between 34 and 40°F.
4. Sample cabinet is to be kept under lock and key when not in use.
5. All samples should be delivered to laboratory at end of each collection period.
6. When fresh samples are taken they are returned to the plant and added to the composite sample retained at the plant.
7. Collect a new set of containers for the next sampling period.
8. Report to laboratory any unusual condition that may affect any sample. When a producer requests a duplicate sample, this sample must be properly stored under refrigeration and under lock; also the dealer should be notified.

II. Flavor Control Sample for Laboratory Examination

1. Half-pint milk sample to be taken from each farm tank for flavor analysis.
2. Sample must carry farm identification.
3. Sample to be under refrigeration temperature range 34 to 40°F.

III. Sediment Testing

1. Test to be made at farm or laboratory by approved methods.

IV. Recommended Procedure for Milk Sampling for Bacteriological Examination

1. Use clean sterile containers.
2. Sanitize dipper that is used for sampling in chlorine solution 100 p.p.m., or the approved equivalent.
3. Where sterile single-service milk thieves are used for sampling, one thief is to be used for each farm and destroyed.
4. Open container, using care not to contaminate milk contact surfaces.
5. Milk samples must be maintained at 34 to 40°F.
6. Sample containers must carry producer identification.
7. Samples must be kept locked up when in possession of hauler.
8. Samples should be delivered to laboratory.
9. Dipping a container in the milk is not an acceptable procedure.

Test Examination Questions

Following are the questions most commonly asked on state and municipal examinations for weigher's, sampler's, and bulk milk hauler's licenses.

How would you define milk?

What is a composite sample?

How do you collect samples?

What kind of equipment is used in sampling?

What special precautions have to be taken in sampling?

How long must milk in a bulk tank be agitated?

How are sample bottles identified?

Why are preservatives used in composite bottles?

What care is given to composites?

Can single-service tubes be used for collecting samples? Explain.

What is a satisfactory sampling device?

Can milk samples always be collected?

What equipment is needed on a bulk tank to weigh and sample milk?

Do you refrigerate samples in transit?

Do you refrigerate samples to which preservatives were added?

What temperature is used for storage of composites?

Why do bulk tanks have indicating thermometers on them?

Do the thermometers on bulk tanks need checking?

How do you determine whether the milk is suitable for pickup?

What should be the temperature of milk to be picked up?

Should milk be rejected?

Who checks the level of the tank?

Should tanks be fastened to the floor?

What state agency approves calibration?

How do you calibrate a farm tank?

Do farmers have to have a bulk tank license?

What data should be left with the farmer at the time of pickup?

How would you wash and sanitize a bulk tank?

When should you sanitize?

Must tankers be approved by regulatory officials?

What size and length of tubing are generally used?

Should sanitizing compounds be used in making connections from tanker to tank?

How do you wash and sanitize the tanker?

Can you unload tankers in the open?

Why is it essential to wash hands frequently?

Notice there are only a few questions on milk quality. Sampler's and weigher's licenses generally do not cover this important aspect. The data provided in this publication will answer most of the questions concerning this phase of milk hauling.

Prospective haulers should study the regulatory agencies of their market demands covering bulk milk pickup.

SUPERVISING CONTROL AGENCIES

Pennsylvania Milk Control Commission

Pennsylvania Milk Sanitation Division

New York State Department of Agriculture and Markets

New York State Department of Health

Supervising control agencies of the state or municipality that you operate under

How To Evaluate YOUR JOB*



DO YOU

1. Sanitize tanker and equipment?
2. Keep hose compartment clean?
3. Use hose parts at farm?
4. Check milk for flavor, odor, and extraneous materials?
5. Use cleaning tissue for dip stick?
6. Read dip sticks correctly only after determining tank leveling devices?
7. Record weights and transpose figures correctly?
8. Read and record temperatures accurately?
9. Run agitator four minutes prior to sample collection?
10. Collect samples correctly: Fat, Sediment, or Bacteria?
11. Collect samples before running pump?
12. Rinse tanks?
13. Leave milk in tank?
14. Wipe or rinse milk off cooler?
15. Wash floors?
16. Follow a carefully regulated routine?
17. Keep neat and clean?
18. Wash hands frequently?
19. Mind your own business and not gossip?
20. Know regulations governing market?

* *Twin Cities quality control laboratory check list.*

For More Information _____

Your county agricultural agent and your state agricultural extension service can and will provide you with additional data if you so desire.

